



Safe Operation Practices Set-Up Operation Maintenance Service Troubleshooting

OPERATOR'S MANUAL



Brushcutter XT143/XT133

WARNING



**READ AND FOLLOW ALL SAFETY RULES AND INSTRUCTIONS IN THIS MANUAL
BEFORE ATTEMPTING TO OPERATE THIS MACHINE.**

FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.

Thank You

Thank you for purchasing a Brushcutter manufactured by MTD Asia. It was carefully engineered to provide excellent performance when properly operated and maintained.

Please read this entire manual prior to operating the equipment. It instructs you how to safely and easily set up, operate and maintain your machine. Please be sure that you, and any other persons who will operate the machine, carefully follow the recommended safety practices at all times. Failure to do so could result in personal injury or property damage.

All information in this manual is relative to the most recent product information available at the time of printing. Review this manual frequently to familiarize yourself with the machine, its features and operation. Please be aware

that this Operator's Manual may cover a range of product specifications for various models. Characteristics and features discussed and/or illustrated in this manual may not be applicable to all models. MTD Asia reserves the right to change product specifications, designs and equipment without notice and without incurring obligation. If you have any problems or questions concerning the machine, phone a authorized MTD service dealer or contact us directly.

MTD's Customer Support telephone numbers, website address and mailing address can be found on this page. We want to ensure your complete satisfaction at all times.

Throughout this manual, all references to **right** and **left** of the machine are observed from the operating position.

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Record Product Information

Before setting up and operating your new equipment, please locate the model plate on the equipment and record the information in the provided area to the right. You can locate the model plate by standing at the right side of the brush cutter and looking down at the end of the shaft tube. This information will be necessary, should you seek technical support via our web site, Customer Support Department, or with a local authorized service dealer.

MODEL NUMBER

--	--	--	--	--	--	--	--	--	--	--

SERIAL NUMBER

--	--	--	--	--	--	--	--	--	--	--

Customer Support

Please do NOT return the machine to the retailer or dealer without first contacting our Customer Support Department.

If you have difficulty assembling this product or have any questions regarding the controls, operation, or maintenance of this machine, you can seek help from the experts. Choose from the options below:

- ◇ Visit us on the web at www.mtdproducts.com
- ◇ Call a Customer Support Representative at (512) 6289-1900 Extension 5691
- ◇ Write us at No.18 RuiPu Road EPZ B,Suzhou Industrial Park,Jiang Su Province,PRC 215121

SAFETY INSTRUCTIONS

1. Read, understand, and follow all instructions on the machine and in the manual before attempting to assemble and operate. Make sure you are familiar with all controls and their proper operation.
2. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
3. Never allow children or adults who have not been properly trained to operate this machine.
4. Make sure that you know how to stop the machine and disengage it quickly.
5. Check and inspect the unit before using it. Replace damaged parts. Check whether fuel is leaking. Ensure that all connections secured.
6. Whenever it is possible, clean the working area from all foreign objects such as stones, metal wire, or broken glass which could be ejected or become tangled in the rotating parts. These objects could be dangerous for yourself or bystanders or may cause damage to the machine.
7. The area around the operator with a radius of 15 meters is considered to be the dangerous zone. There should be no person within this area while working. Switch off the machine immediately if anyone enters the dangerous zone.
8. The brush cutter is designed for cutting grass, shrub and small tress only. Never use it for any other purpose.
9. Do not use this unit if you are tired or ill or under the influence of alcohol, drugs or medication.
10. Always wear thick, close fitting slacks and shirt and proper safety equipment such as eye goggles, earplugs, gloves, and work shoes.
11. Never start or use this machine indoors or in a poorly ventilated area. Engine exhaust contains carbon monoxide, an odorless and deadly gas. It is harmful to your health.
12. Before starting the machine, make sure the rotary spool head or blade won't touch the ground and/or any obstacles.
13. Working on wet lawn is very dangerous. Slipping while operating this machine may injure you. Remember to shut down the machine immediately once you feel unstable.
14. Never operate this machine without good visibility or light. Always be sure of your footing and keep a firm hold on the handles.
15. If the unit starts vibrating abnormally, switch off the engine and locate the cause immediately. Vibrations are always a warning sign.
16. Muffler and engine become hot and can cause a burn. Do not touch.
17. After shutting down the machine, do not put it on the ground until the rotary blade is stopped.

18. The rotary spool head and/or the cutting blade may keep running for a short time just after your shutting it down. Always be aware of the rotating parts; they are dangerous. If the cutting attachments cannot stop at idling, you should adjust the carburetor.
19. Never use parts, accessories or attachments which are not authorized for this unit. Otherwise, the user may be seriously injured and/or the unit damaged and the warranty may be deemed null and void.
20. If situations occur which are not covered in this manual, please contact MTD customer service department or your nearest local dealer.

SYMBOLS



- **SAFETY AND WARNING SYMBOL**

Indicates danger, warning or a reason to be cautious. Can be used together with other symbols or pictograms.



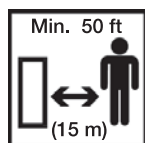
- **READ OPERATING MANUAL**

Non-compliance with the operating instructions and precautions may result in serious injuries. Read the operating manual before starting or operating the unit.



- **WEAR EYE AND EAR PROTECTION**

CAUTION: Ejected objects may cause serious eye injuries and excess noise may cause loss of hearing. When operating the unit, wear eye and ear protection.



- **KEEP BYSTANDERS AWAY**

CAUTION: All bystanders, especially children and pets, must be kept at least 15m from the working area.



- **PETROL**

Always use clean and fresh lead-free petrol for mixing petrol.



- **OIL**

Use only authorised oil according to the operating manual for mixing petrol.



- **EJECTED OBJECTS AND ROTATING PARTS MAY CAUSE SERIOUS INJURIES**

CAUTION: Do not use the unit if the protective housing has not been correctly positioned for cutting. Keep away from the rotating line coil.

START

- **IGNITION SWITCH**
START

I

- **IGNITION SWITCH**
RUN

0

- **IGNITION SWITCH**
OFF/STOP



- **BEWARE OF HOT SURFACES**

Do not touch hot muffler cover, gearbox or cylinder. You could burn yourself. These parts become extremely hot while the unit is being used. They remain hot for a short time even when the unit is switched off.



- **SHARP BLADE**

CAUTION: Sharp blade on the guard. To prevent serious injuries, do not touch the blade.



- **CHOKE SETTINGS**

1. FULL CHOKE start position.
2. HALF CHOKE intermediate position.
3. Operating position

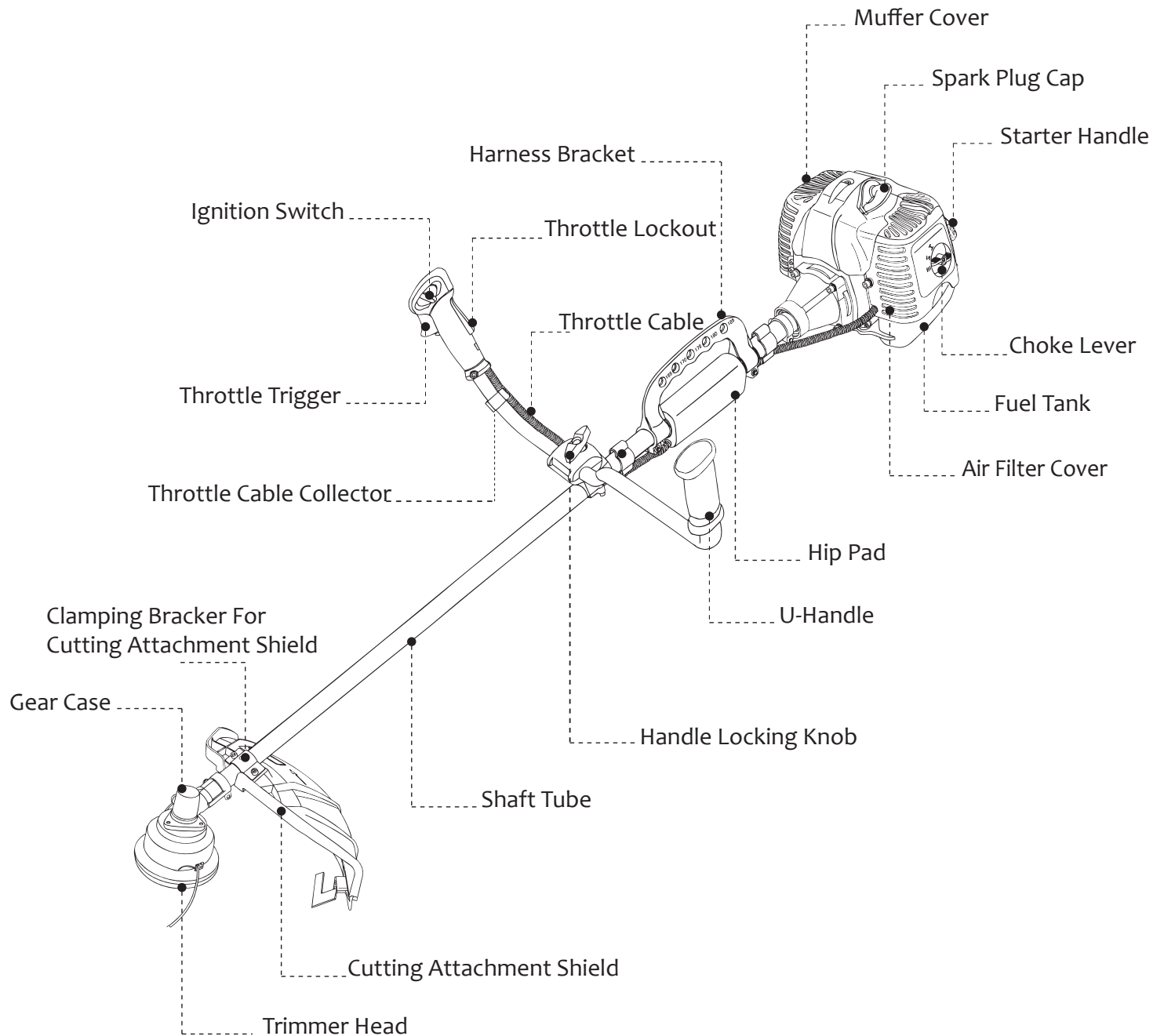


max. 9000 min⁻¹

- **MAXIMUM RPM**

Do not let the unit run more quickly than the maximum rpm.

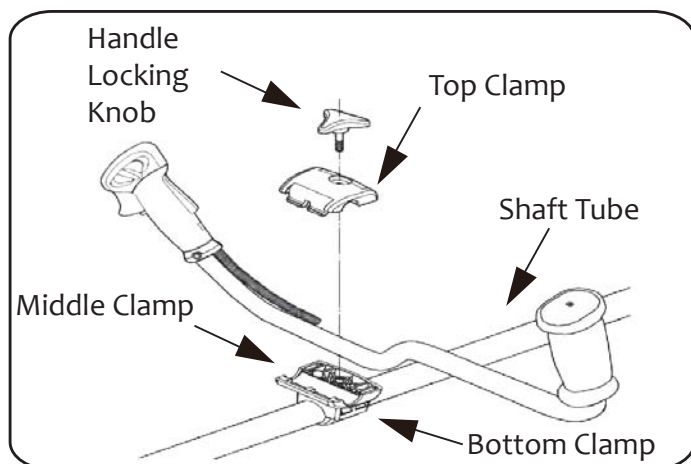
Get to know your Brush Cutter



ASSEMBLY INSTRUCTIONS

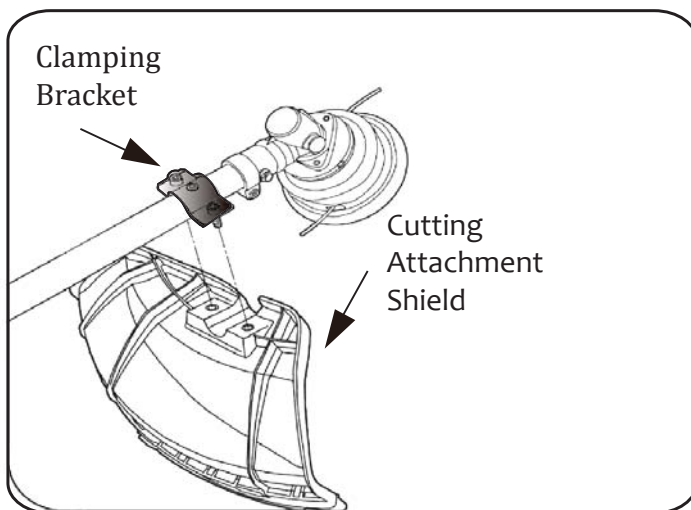
INSTALL AND ADJUST THE U-HANDLE

1. Put the U-handle between the top and middle clamps, and then connect the top, middle and bottom clamps by tightening the handle locking knob.
2. You can adjust the operating angles of the handle by loosening the handle locking knob.



INSTALL THE CUTTING ATTACHMENT SHIELD

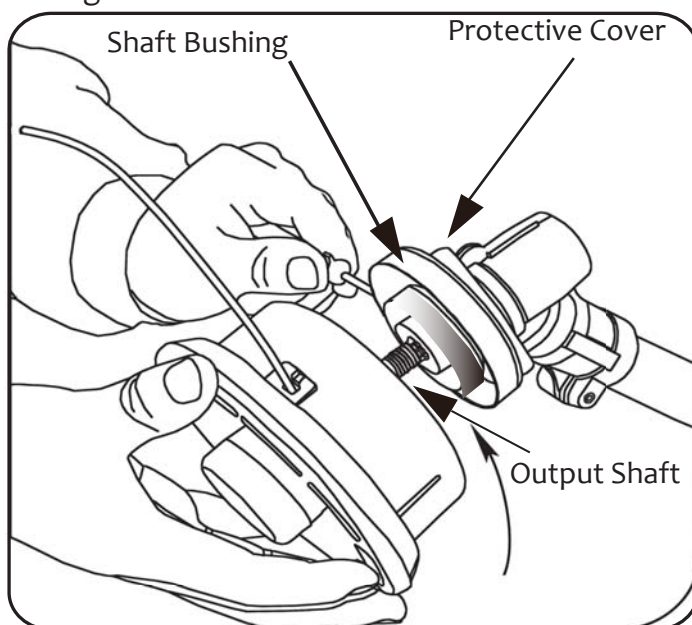
Align the two holes on the cutting attachment shield with the other two holes in the clamping bracket, and then use the two screws to connect them together.



INSTALL THE CUTTING ATTACHMENT

INSTALL THE TRIMMER HEAD

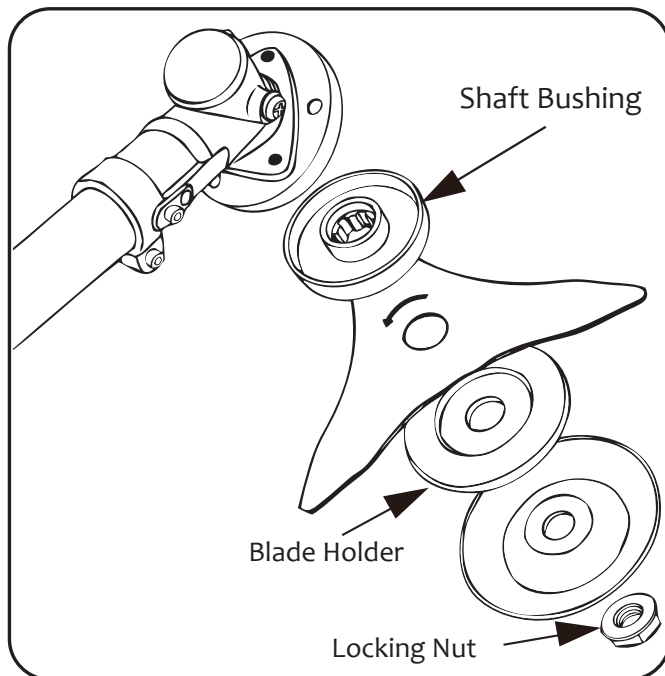
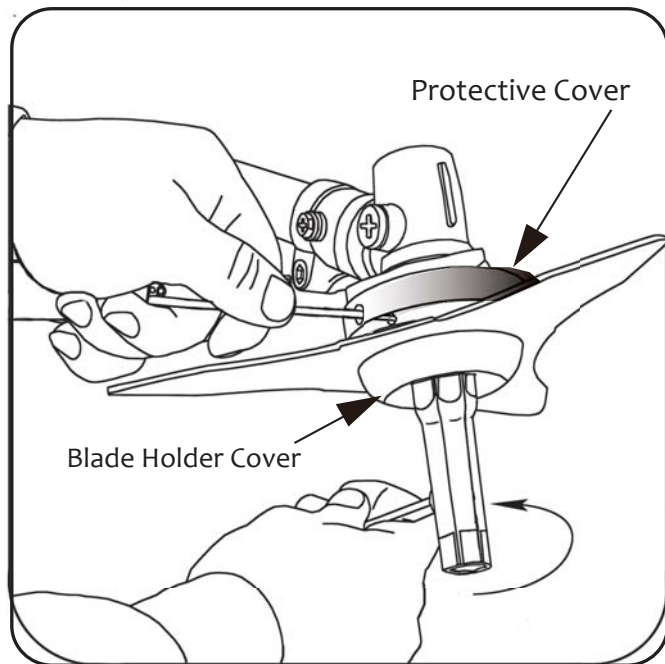
1. Align the shaft bushing hole with the locking rod slot in the protective cover and the notch in the gear case, and then insert the locking rod into these three holes/slots. Holding the locking rod to ensure the output shaft in place.
2. Ensure the threads of the trimmer head and the center of the output shaft are in line with each other, and then rotate the trimmer head anticlockwise until it is securely tightened.



INSTALL THE CUTTING BLADE

1. Align the shaft bushing hole with the locking rod slot in the protective cover and the notch in the gear case, and then insert the locking rod into these three holes/slots. Holding the locking rod to ensure the output shaft in place.
2. Install the blade to the output shaft and make sure it contacts closely with the shaft bushing.

3. Install the blade holder and blade holder cover one by one.
4. Finally, install the locking nut and tighten it by the hex wrench.



FUEL AND OIL INSTRUCTIONS

OIL

1. Only use high quality air cooled 2-stroke engine oil. Never use water cooled engine oil or any oil for 4-stroke engine.

Fuel

1. Always use fresh, clean lead-free fuel. Minimum octane number: 90.

Mixing Ratio

1. Recommended mixing ratio of fuel and oil is 25:1.

Warnings

1. Keep sparks and open flames at a distance from the area where you mixing the fuel or filling the fuel tank with the mixture.
2. Do not mix the fuel and oil directly in the fuel tank; always use the mixing tank to do this job.
3. Do not fill the fuel tank with too much mixture. Wipe up any spilled fuel from the unit immediately.
4. Move the unit 5 meters away from the fueling source and site before starting the engine.
5. Never use fuel which has been stored for longer than 30 days. That may bring damage to the unit, especially for the carburetor or the engine.

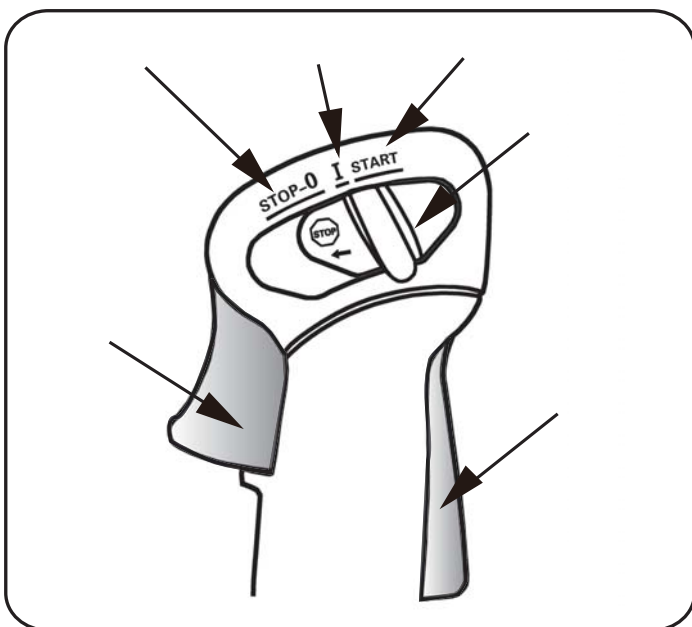
OPERATING INSTRUCTIONS

STARTING COLD ENGINE



WARNING : Before starting the engine, keep the cutting attachment clear of everything around it.

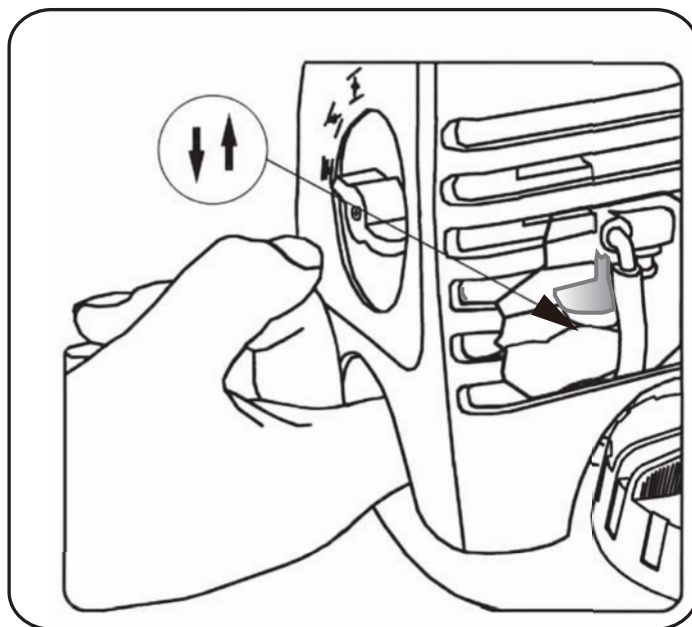
1. Use the mixing tank to mix the fuel and oil. Fill fuel tank with the mixture. See “Fuel and Oil Instructions”.
2. Press and hold the throttle trigger and throttle lockout at the same time, meanwhile use the other hand to push the ignition switch to the “START” position.
3. Release throttle lockout, throttle trigger and ignition switch one by one.



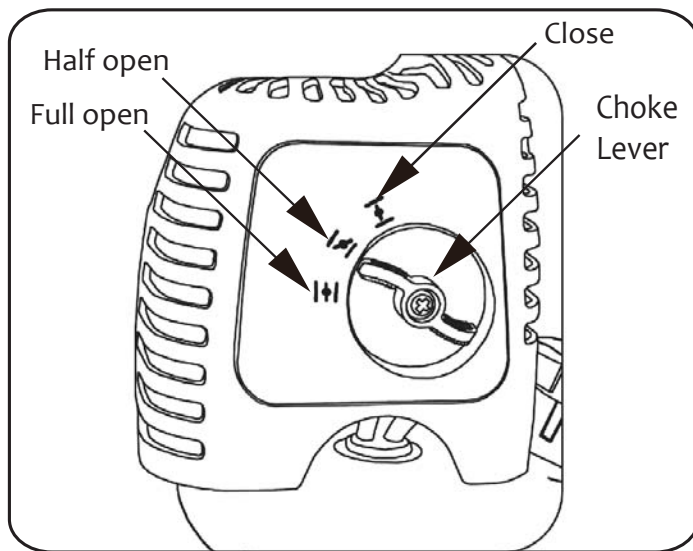
4. Fully press and release the primer bulb for 10 times. Some amount of fuel should be visible in the primer bulb and fuel lines.
5. Move choke lever to the “CLOSE” position.
6. Hold the unit with your left hand and press it against the ground.

7. While holding the starter handle in right hand. Gently pull the starter rope out until you feel that the pawls hook onto the flywheel, and then pull the starter quickly.
8. Repeat several times until the engine starts.
9. Move choke lever to “HALF OPEN” position. Allow the engine to run for 1-2 minutes to warm up according to the different temperatures.

Note : Unit is properly warmed up when engine accelerates without hesitation.



Once the engine is warmed up, place the choke lever to the “Full Open” position. Press throttle trigger to release throttle lock out. The ignition switch will automatically switch to normal running position, and the engine will run at idling speed.



STARTING WARM ENGINE

1. Push the ignition switch to the “START” position
2. Move the choke lever to the “HALF OPEN” position.
3. Hold the unit in left hand and press it against the ground.
4. While holding the starter handle in right hand. Gently pull the starter rope out until you feel that the pawls hook onto the flywheel, and then pull the starter quickly.
5. Repeat several times until the engine starts.
6. Move the choke level to the “Full Open” position.

STOPPING INSTRUCTIONS

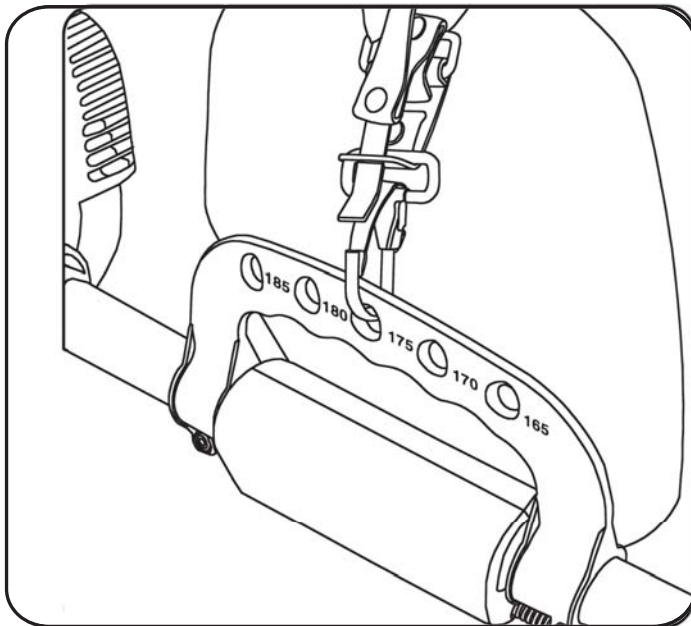
1. Release the throttle trigger, and then leave the idling engine to cool down.
2. Move the ignition switch to the “OFF” position and hold until the engine is off.



WARNING : Move the choke lever to the “CLOSE” position if the engine can not be shut down by the two upper steps, then adjust carburetor after the machine becomes cold or contact the authorized dealer for help.

SHOULDER HARNESS

1. Wear the harness on the shoulder then adjust the straps and buckles according to your stature until you feel comfortable with it on.
2. Attach harness hook to a suitable suspension point on the harness bracket according to the height identifications. Make sure the unit gets a good balance before operating.



WARNING : Use the quick-release mechanism on the harness to free yourself quickly from the unit in case of emergency.

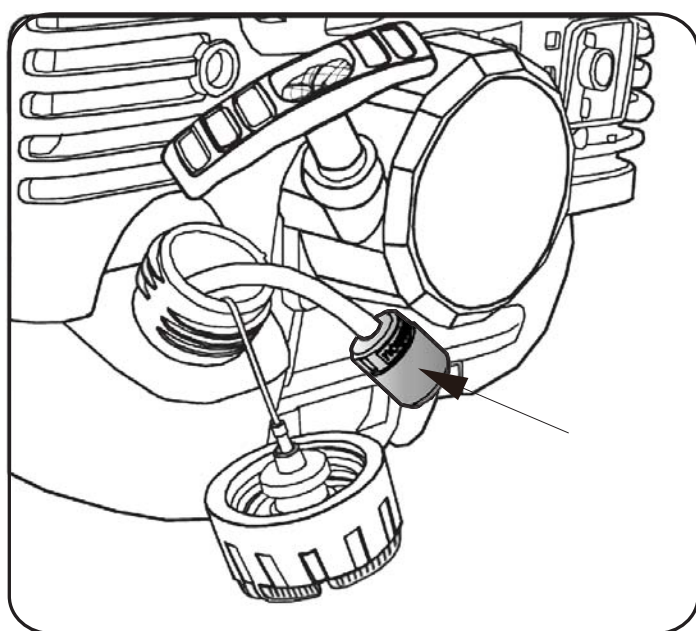
SETTING THE LENGTH OF THE CUTTING LINE

1. The trimmer head releases the line without having to stop the engine. To do this, briefly tap the trimmer head on the ground while operating the unit at high speed.
2. The cutting line should always have the max. length. The shorter the cutting line becomes, the more difficult it is to release.
3. The shield is equipped with a cutoff knife which automatically removes any excess line that is released.
4. The shield is equipped with a cutoff knife which automatically removes any excess line that is released.

MAINTENANCE AND REPAIR

FUEL FILTER

1. Empty the fuel tank.
2. Pull the fuel filter out of the tank with a hook or wire and disconnect from the fuel hose.
3. Replace the old filter with a new one and put the fuel filter and the fuel hose back to the fuel tank.



AIR FILTER

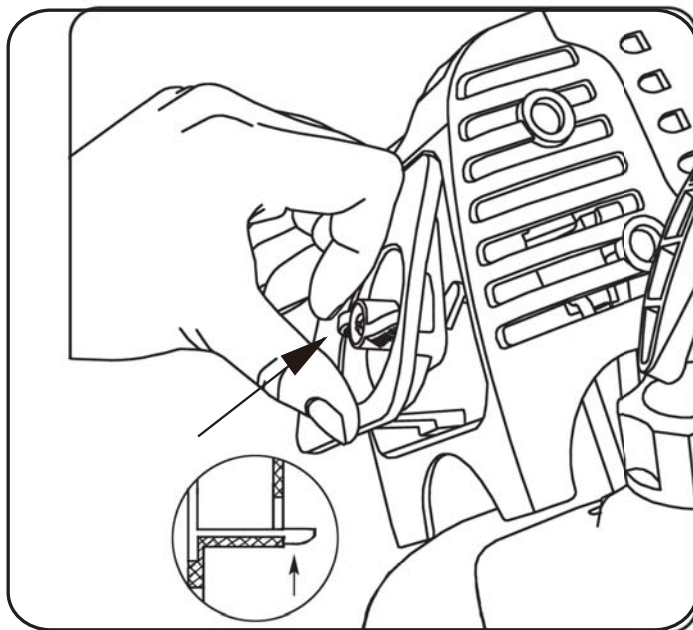
Clean and lubricate air filter at every 10 hours of use. It is important to service these components properly. If the air filter is not cleaned and serviced, any warranty will be deemed null and void.



WARNING: The choke cover is specially designed that it can be assembled or disassembled when the choke lever is at the “Full Open” position.

1. Open the choke cover and pull the filter from the air filter housing.

2. Clean air filter with neutral detergent and flush out thoroughly with clean water, leave to drip and dry completely.
3. Drop adequately clean engine oil on the air filter.
4. Press on the filter to distribute the oil and remove excess oil.



5. Close choke cover, ensuring that it locks in place.
6. Install air filter.
7. Close choke cover, ensuring that it locks in place.

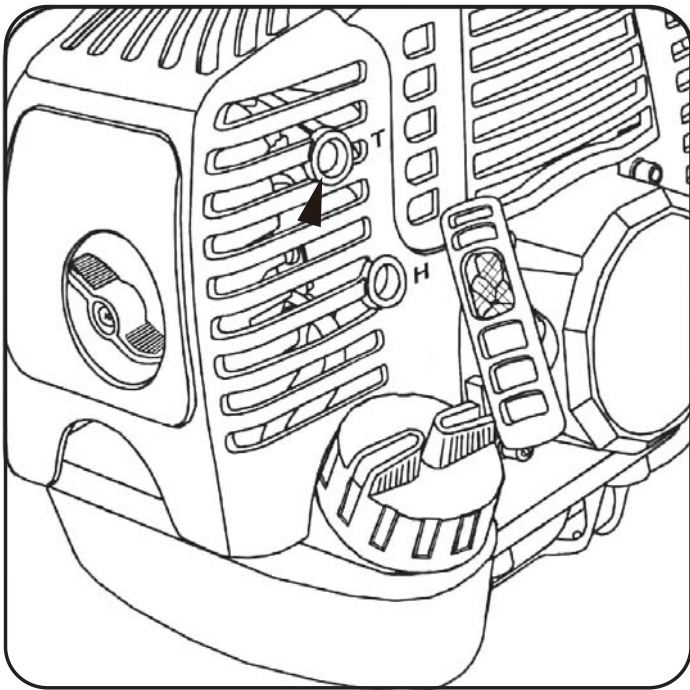
CARBURETOR

1. Idling speed can be adjusted by idle-speed screw.

2. Adjusting the idle-speed screw clockwise will increase the idling speed and adjusting it counterclockwise will decrease the idling speed. You should use a tachometer to measure the speed while adjusting. Make sure the idling speed within the recommended range 2800~3200 rpm.
3. Every unit had been run and tested at the factory to ensure that the carburetor works at its best condition. But after a period of use, if trimmer head or cutting blade continues to rotate at idling or the engine stops when you fully release the throttle trigger, make adjustment to idle-speed screw.



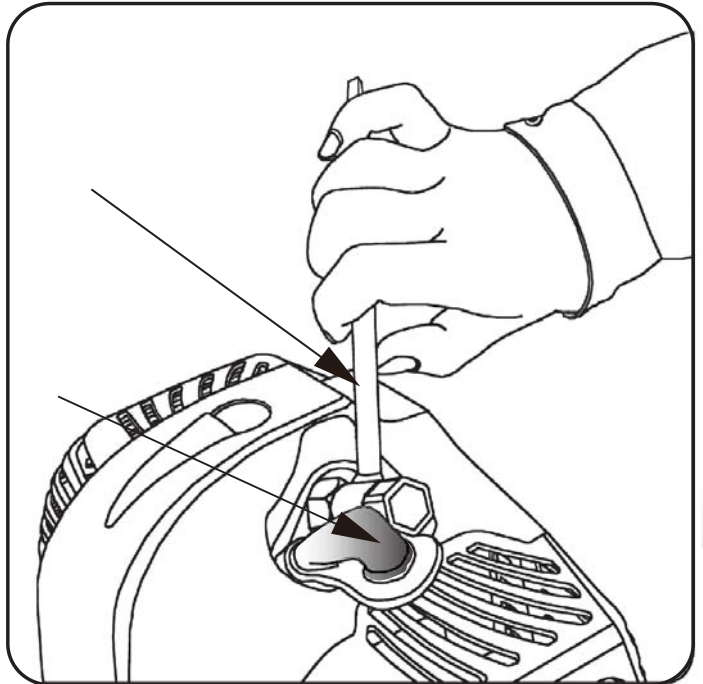
WARNING : Improper adjustment may cause damage to the unit. If engine does not run well after carburetor adjustment, please contact the authorized dealer where you bought the product.



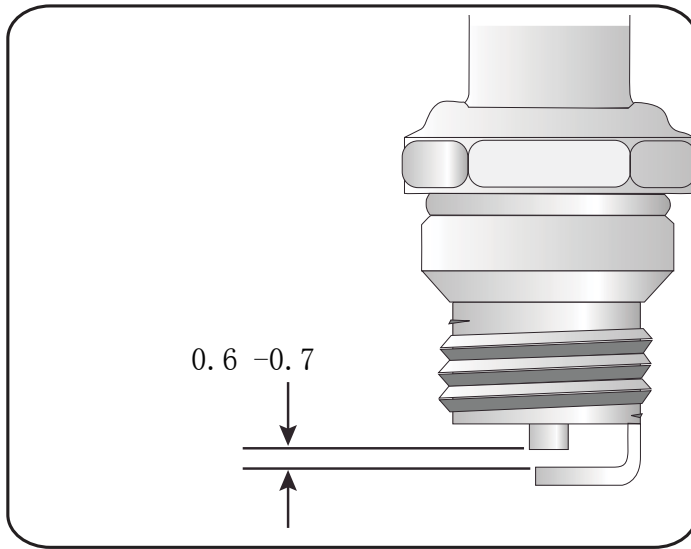
SPARK PLUG

After every 25 operating hours take out the spark plug and check its condition.

1. Switch off the engine and allow it to cool down.
2. Grasp the plug wire firmly and pull it from the spark plug.
3. Wipe off dust or dirt around spark plug.
4. Unscrew spark plug in counterclockwise direction with the attached spark plug wrench.
5. Brush off carbon deposits.

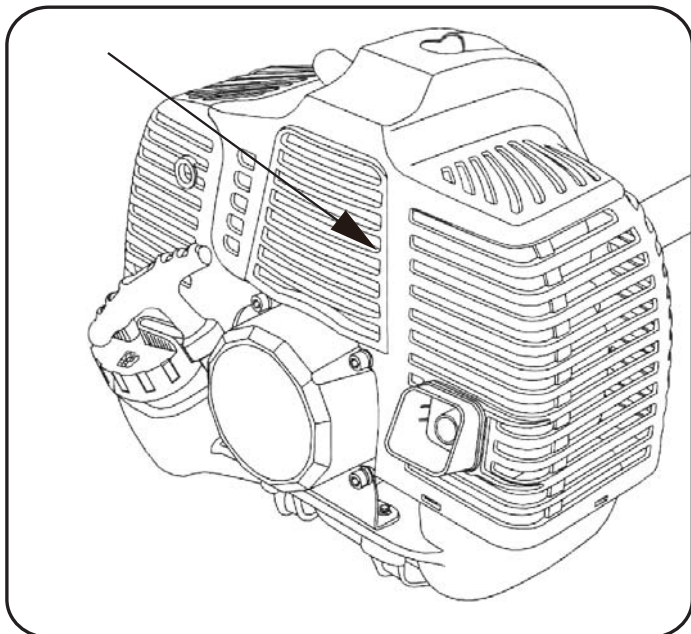


6. Check and adjust spark plug gap to 0.6-0.7 mm.
7. Screw in the spark plug and tighten to a torque of 14-17N•m. Do not over tighten.
8. Re-attach the spark plug cap.
9. If spark plug is damaged or the unit still cannot work well after cleaning, replace with a new one.
10. To ensure the machine work well Please use the specified plug .



MUFFLER

1. Check muffler at every 25 hours of use.
2. Make sure the unit is cool before any inspection or cleaning, otherwise you may get burned by the hot muffler.
3. Take off muffler cover, unscrew the fixing bolt.
4. Check air intake and exhaust vent for carbon deposits or other stain. Clear away with applicable tools.
5. Reinstall the muffler and retighten the fixing bolt firmly, assemble the muffler cover back.

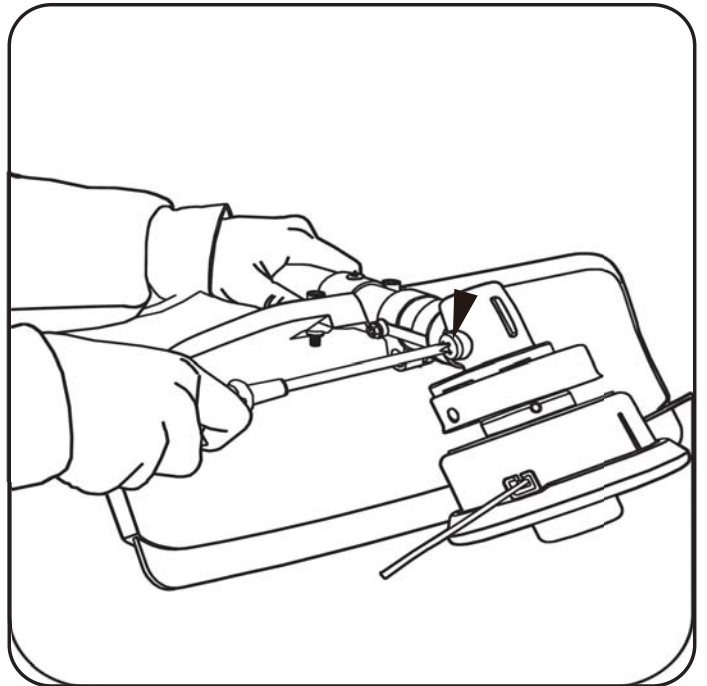


GEAR CASE



WARNING : Improper adjustment may cause damage to the unit. If engine does not run well after carburetor adjustment, please contact the authorized dealer where you bought the product.

1. Stop the engine to check if there is enough lubricating grease in the gear case after every 25 hours of use.
2. Remove the oiling bolt on the gear case.
3. Replenish good quality lithium grease as necessary, but do not overfill.
4. Screw and tighten the bolt.



CLEANING AND STORAGE

CLEANING

1. Brush off dust and grass cuttings from the unit and wipe up water and oil stain with dry cloth.

STORAGE

1. Keep the unit away from flames or sparks when it contains fuel.
2. Allow the unit to cool before storage.
3. Store the unit in a dry, well-ventilated and secure location or at an adequate height to prevent any inadvertent use or damage. Keep out of the reach of children.

LONG-TERM STORAGE

1. Drain all the fuel out of the tank into a container with an identical fuel for 2-stroke engines. Do not use fuel which has been stored for longer than 30 days.
2. Start the engine and leave running until it stops. This ensures that all the fuel has been drained out of the carburetor and used up.
3. Stop the engine and allow it to cool down. Remove the spark plug and pour 30ml high quality two-cycle engine oil into the cylinder. Gently pull the starter rope to disperse the oil. Set the plug back.



WARNING : Before using the unit after the storage period, remove the spark plug and pour out all the engine oil from the cylinder.

1. Completely clean every part and carefully inspect for damaged or loose parts. Repair or replace the damaged parts and, if necessary, tighten all loose screws, nuts and bolts. Apply anti-rust oil to the metal parts such as throttle cable. The unit is now ready for storage.
2. Store the unit in a dry, well-ventilated and secure location or at an adequate height to prevent any inadvertent use or damage. Keep out of the reach of children.

TRANSPORTATION

1. Before transporting the unit, allow it to cool down.
2. Empty the fuel tank before transit. Make sure the fuel cap is securely tightened.
3. It is better to take off the cutting attachments and protect them with a proper cover to avoid unexpected damage.
4. Secure the unit with rope to prevent it from shifting during transportation. Do not try to transport it by a bicycle or motorcycle.

TROUBLE-SHOOTING

Problem	Cause	Remedy
Engine does not start	<ol style="list-style-type: none"> 1. Spark plug wire disconnected. 2. Ignition switch set to OFF. 3. Fuel tank empty. 4. Stale or improperly mixed fuel mixture. 5. Dirty air filter/oil filter. 6. Incorrectly gapped or dirty spark plug. 7. Primer bulb not depressed adequately. 8. Flooded engine. 	<ol style="list-style-type: none"> 1. Reconnect wire. 2. Set switch to ON. 3. Add fuel. 4. Empty the tank and fill with fresh fuel mixture. 5. Clean or replace filter. 6. Clean or adjust the gap. 7. Slowly and fully depress the primer bulb 10 times. 8. Squeeze the throttle and pull the starter rope with the choke lever in the operating position.
Engine does not run constantly at no load	<ol style="list-style-type: none"> 1. Dirty air/oil filter. 2. Stale or improperly mixed fuel mixture. 3. Incorrectly gapped or dirty spark plug. 	<ol style="list-style-type: none"> 1. Clean or replace filter. 2. Empty the tank and fill with fresh fuel mixture. 3. Clean or adjust the gap.
Engine does not idle	Improper carburetor adjustment	Adjust according to the manual or turn to an authorized service dealer for help.
Engine does not accelerate	<ol style="list-style-type: none"> 1. Dirty air/oil filter. 2. Throttle wire disconnected. 3. Defective throttle control lever. 4. Incorrectly gapped or dirty spark plug. 5. Improper carburetor adjustment 	<ol style="list-style-type: none"> 1. Clean or replace filter. 2. Reconnect throttle wire. 3. Replace the throttle control lever. 4. Clean or adjust the gap. 5. Adjust according to the manual or turn to an authorized service dealer for help.

Problem	Cause	Remedy
Engine has no power or stops during cutting	<ol style="list-style-type: none"> 1. Spool head or blade entangled with grass. 2. Dirty air/oil filter. 3. Stale or improperly mixed fuel mixture. 4. Improper carburetor adjustment 	<ol style="list-style-type: none"> 1. Stop the engine and clean the cutting attachment. 2. Clean or replace the filter. 3. Empty the tank and fill with fresh fuel mixture. 4. Adjust according to the manual or turn to an authorized service dealer for help.
If further assistance is required, please contact your authorized service dealer.		

SPECIFICATION

Specification	XT143	XT133
Engine:	Air cooled 2-stroke engine	Air cooled 2-stroke engine
Displacement:	42.7cc	32.6cc
Carburator:	Diaphragm	Diaphragm
Clutch Type:	Centrifugal	Centrifugal
Starter:	Recoil	Recoil
Max. Power:	1200W	1050W
Reduction Ratio:	4:3	4:3
Mixing Ratio(Fuel/Oil):	25:1	25:1
Idel Speed:	2800~3200RPM	2800~3200RPM
Speed at Max. Torque:	6500RPM	6500RPM
Speed at Max. Power:	7500RPM	7500RPM
Max. Cutting Speed:	9000RPM	9000RPM
Trimmer Head Cutting Diameter:	Ø 420mm	Ø 420mm
Diameter/Length of Cutting Line:	Ø 3mm/3m	Ø 3mm/3m
Blade Cutting Diameter:	Ø 255mm	Ø 255mm
Thickness of Blade:	2mm	2mm
Diameter of Shaft Tube:	Ø 28mm	Ø 28mm
Fuel Tank Capacity:	1.1L	0.9L
Harness:	Deluxe/Loop	Deluxe/Loop
Net Weight:	8.4Kg	7.7Kg
Pakage Size:	183x29x30/11cm	183x27x28.5/11cm

NOTES

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PACKING LIST

Description	Qty.
1. Main Unit (Including U handle)	1
2. Deluxe Back Pack Harness	1
3. Cutting Blade	1
4. Cutting Attachment Shield	1
5. Trimmer Head (Instruction Attached)	1
6. Manual	1
7. Warranty Card	1
8. Mixing Tank	1
9. Accessory Bag	1
9.1 Safety Glasses	1
9.2 Goggle	1
9.3 Loop Harness	1
9.4 Ear Plug	1
9.5 Tool Bag	1
9.5.1 Spark Plug Wrench	1
9.5.2 Screwdriver	1
9.5.3 Inner Hexagon Wrench	2